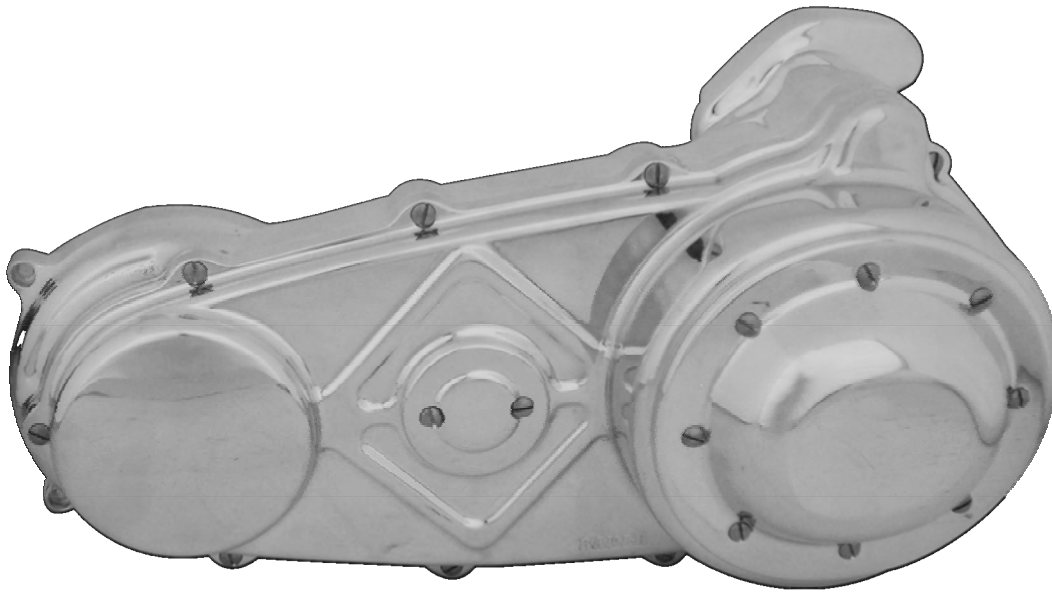


# BAKER TIN TYPE PRIMARY



INNOVATIVE DRIVETRAIN COMPONENTS  
FOR AMERICAN MOTORCYCLES



BAKER DRIVETRAIN  
**TTP**  
TIN TYPE PRIMARY

## TIN TYPE PRIMARY OVERVIEW

### FEATURES

- Billet 6061-T6 aluminum inner and outer primary housings available in steel shot blasted or show polished finish
- Available in kick only and 1.4kw 1990-2006 style starter configuration
- Starter type includes jackshaft and related hardware
- Modern chain fine tooth adjuster shoe and L-bracket included
- O-ring sealed locking flanged nuts for transmission-to-inner primary studs
- Nostalgic slotted screws, gasket, and related hardware included
- Zero Leak drain plug with magnet standard
- Chain oiler and suction hardware included
- Inner primary is reinforced for strength around the mainshaft bore
- Works with stock style derby and inspection covers

### OPTIONAL RELATED HARDWARE

- Aluminum Derby and Inspection cover kit, pn3102-TTP-P Show Polished and pn3102-TTP-R Shot Blasted
- Splined 4-Speed mainshaft and Splined Shovel Clutch (diaphragm type), recommended for 93+” motors, pn9P401
- Clutch release arm kit, pnTTP-200A (use with stock style mechanical cable)

### FITMENT

- 1970-E84 Shovelhead® 4 Speeds
- BAKER 6N4
- Custom Applications (Alternator/Stator Motors)
- Not Compatible With Factory Mid Controls

### TOOLS, RESOURCES, REQUIRED PARTS

- Factory Service Manual For Your Motorcycle
- Factory Parts Manual For Your Motorcycle
- Common Hand Tools (Allen Wrenches, Sockets, Screwdrivers etc.)
- ½” Impact Gun, 1 1/2” Socket (Motor), 1 7/16” and 1 3/16” Socket (Clutch)
- Torque Wrench (ft-lbs. and in-lbs.)
- Clutch Hub Puller, pn 95960-41A or Equivalent
- Dial Calipers or Equivalent (Chain Alignment)
- Straight Edge (Chain Alignment)
- Blue Loctite® (242 Removable) or Equivalent
- Red Loctite® (271 Permanent) or Equivalent
- Permatex® Silicone Sealant or Equivalent
- Pipe Thread Sealant (Loctite® 567) or Equivalent
- Motor O-Ring (pn11147A)
- Motor Sprocket Kit with Shims (1955-64 Splined Non-Compensator)
- 1990-2006 1.4kw H-D® Starter pn 31553-94B (Starter Versions Only); With New Cable & Boot

# **TIN TYPE PRIMARY**

## **TABLE OF CONTENTS:**

2. Overview
3. Table Of Contents
4. .983" VS 1.000" Mainshaft Diameters (For Old Style 6N4 Users)
5. Included Parts Breakdown Tin Type Primary, Starter Version
6. Included Parts Breakdown Tin Type Primary, Starter Version Legend
7. Included Parts Breakdown Tin Type Primary, Kicker Version
8. Included Parts Breakdown Tin Type Primary, Kicker Version Legend
9. Preparation Tin Type Primary
10. Tin Type Primary Installation
11. Tin Type Primary Installation Starter Versions
12. Tin Type Primary Installation Starter Versions / Continued
13. Tin Type Primary Installation Continued
14. Tin Type Primary Installation Continued / Finish Line
15. Terms
16. Disclaimer

## TIN TYPE PRIMARY MAINSHAFT DIAMETERS

### TTP PART NUMBER AND FITMENT FOR MAINSHAFT DIAMETERS

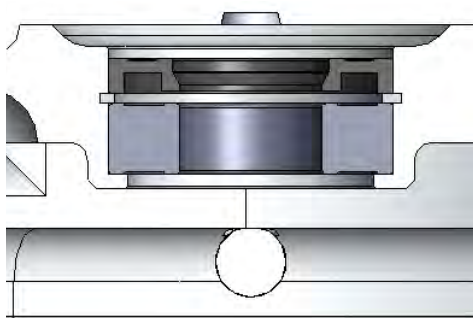
**TTP Part Numbers for the old style 6N4 with the .983" diameter mainshaft:**

PN 3100-TTP-R-6N4, Media blasted TTP assembly w/ hardware, Kick Only -6N4 w/ .983" Shaft  
 PN 3100-TTP-P-6N4, Show polished TTP assembly w/ hardware, Kick Only -6N4 w/ .983" Shaft  
 PN 3101-TTPS-R-6N4, Media blasted TTP assembly w/ hardware, Starter Version -6N4 w/ .983" Shaft  
 PN 3101-TTPS-P-6N4, Show polished TTP assembly w/ hardware, Starter Version -6N4 w/ .983" Shaft

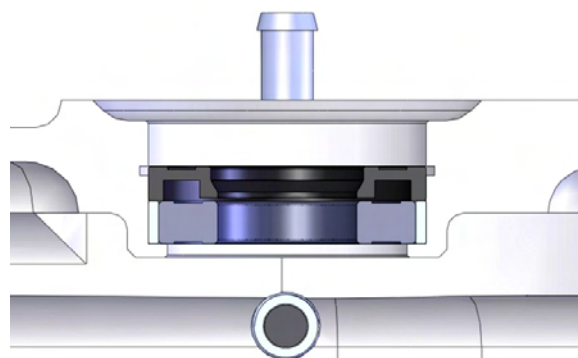
**TTP Part Numbers for the BAKER 4-Speed & 6N4 with the 1.000" diameter mainshaft:**

PN 3100-TTP-R, Media blasted TTP assembly w/ hardware, Kick Only, 4-Speed & 6N4  
 PN 3100-TTP-P, Show polished TTP assembly w/ hardware, Kick Only 4-Speed & 6N4  
 PN 3101-TTPS-R, Media blasted TTP assembly w/ hardware, Starter Version 4-Speed & 6N4  
 PN 3101-TTPS-P, Show polished TTP assembly w/ hardware, Starter Version 4-Speed & 6N4

**TTP bearing & seal placement for the current, 1.000" diameter and .983" diameter mainshafts:**

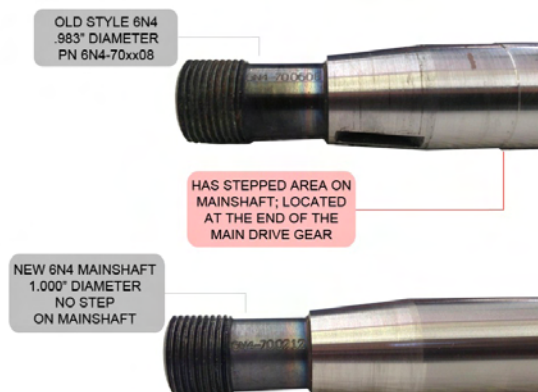
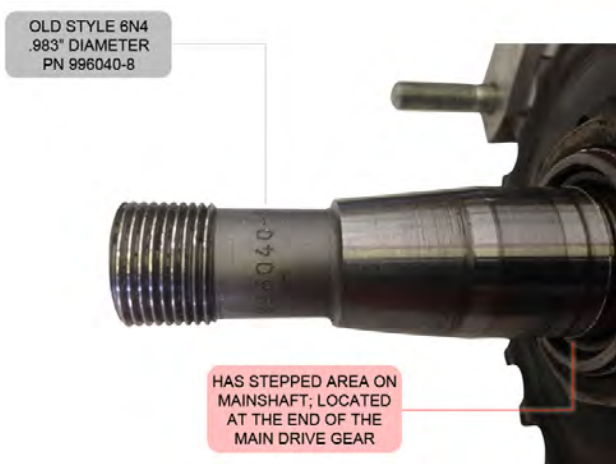


**4-SPEED AND NEW STYLE 6N4 W/ 1.000" MAINSHAFT**  
 R16DDUCE BEARING, 200 RRRI SNAP RING AND  
 56-5101 SEAL



**OLD 6N4 W/ .983" MAINSHAFT**  
 16005 BEARING, 56-1068A ADAPTER SLEEVE, NO  
 SNAP RING AND 56-5101 SEAL

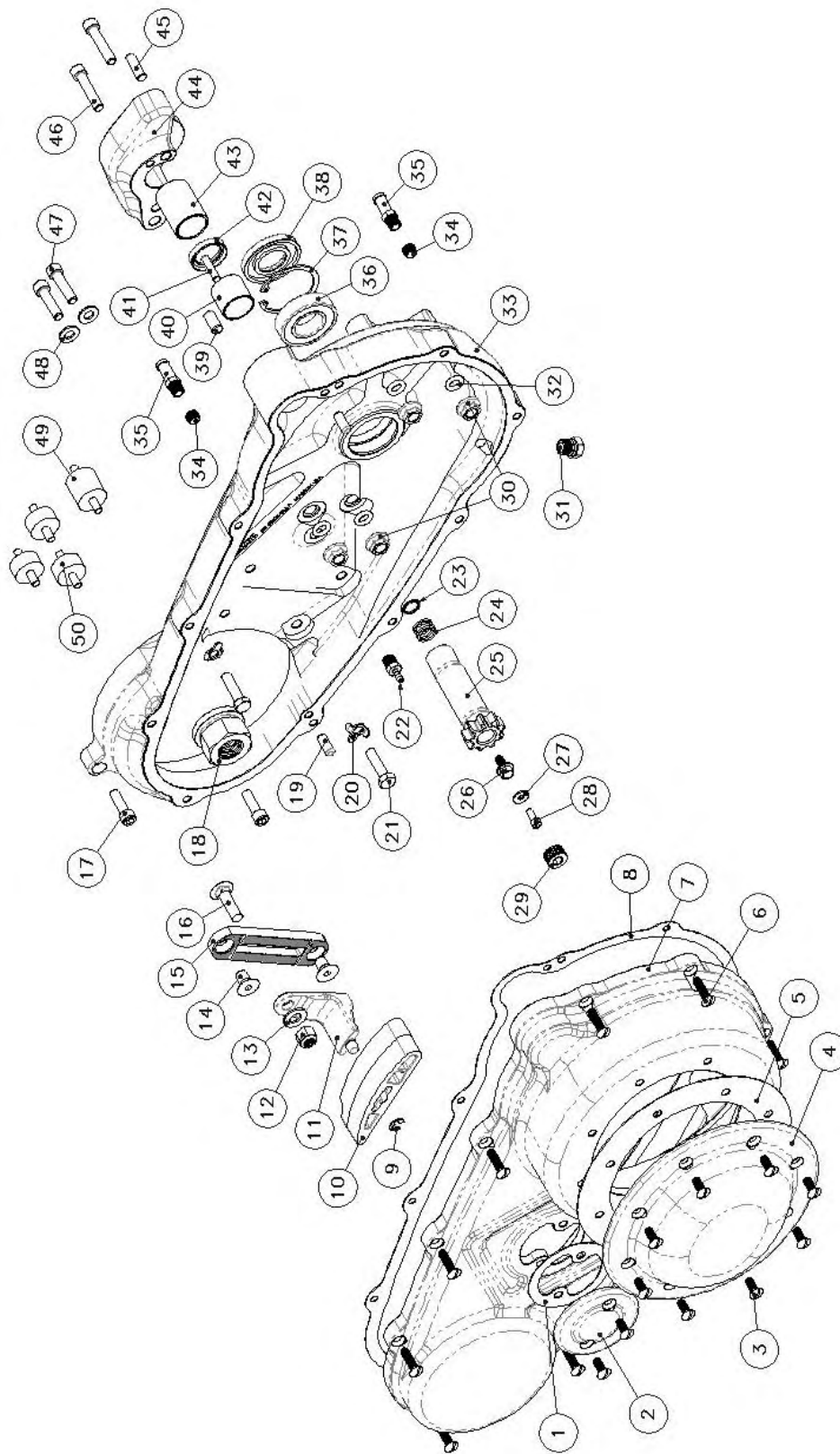
**Old .983" & Current 1.000" diameter mainshaft images:**



**Note:**

We had a couple part numbers for the stepped .983" mainshaft; PN 996040-8 & PN 6N4-70xxxx. (xxxx= month / year). The last stepped .983" mainshaft were made in 2008 (PN 6N4-70xx08).

# EXPLODED VIEW, TTP STARTER VERSION



STARTER VERSION SHOWN; FIGURE 1

## LEGEND, TTP STARTER VERSION

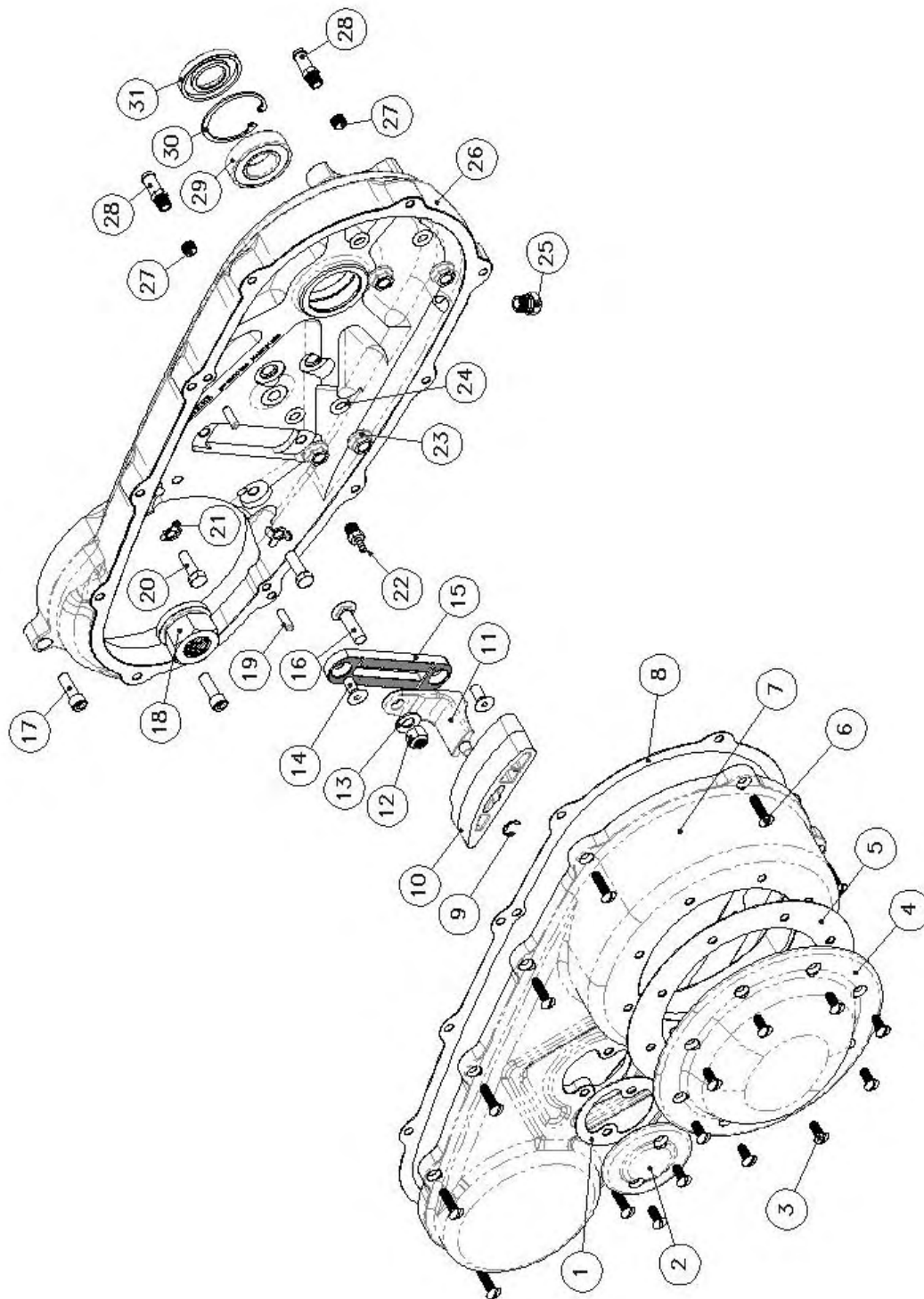
| ITEM | QTY | PN               | DESCRIPTION                               |
|------|-----|------------------|-------------------------------------------|
| 1    | \$  | 60645-GAS        | Gasket, Inspection Cover                  |
| 2    | \$  | 60572-36         | Inspection Cover                          |
| 3    | 10  | 91790A539        | 1/4-20 X .625" Oval Screw S.S.            |
| 4    | \$  | 60555-36         | Derby Cover                               |
| 5    | \$  | 60640-GAS        | Gasket, Derby Cover                       |
| 6    | 10  | 91790A542        | 1/4-20 X 1.000" Oval Screw S.S.           |
| 7    | 1   | 60510-S36        | Outer Primary                             |
| 8    | 1   | 60635S-GAS       | Gasket, Primary                           |
| 9    | 1   | 5304-37PP        | E-Clip, 3/8"                              |
| 10   | 1   | 39976-01         | Shoe, Tensioner                           |
| 11   | 1   | 3068-DSSC        | Tensioner L-Bracket                       |
| 12   | 1   | 37024            | 3/8-16 Nylock Nut                         |
| 13   | 1   | 33082            | Washer, 3/8"                              |
| 14   | 2   | 31C75KFC         | 5/16-18 X .750 FHCS Black                 |
| 15   | 1   | 3069-DSSC        | Tensioner Plate                           |
| 16   | 1   | 21818            | 3/8-16 X 1.250" Bolt                      |
| 17   | 2   | 31C100KCSS/P     | 5/16-18 X 1.000" SHCS S.S.                |
| 18   | 1   | 91030A455        | Flanged Motor Nut                         |
| 19   | 2   | 26751            | 1/4" X .750" Solid Dowel                  |
| 20   | 2   | ZPN292216        | Lock Tab                                  |
| 21   | 2   | 13056            | 5/16-18 X 1.125" Hex Bolt                 |
| 22   | 1   | 5346K15          | 1/8" NPT Barb Fitting                     |
| 23   | 1   | 99-1058          | Splined Washer, Starter Jackshaft         |
| 24   | 1   | 54446-004        | Spring, Starter Jackshaft                 |
| 25   | 1   | 732407-E         | 9 Tooth Starter Jackshaft                 |
| 26   | 1   | 25C50HFB8Z       | 1/4-20 X .500" Hex Bolt W/Flange          |
| 27   | 1   | .203x.546x.048N  | Washer, Starter Bolt                      |
| 28   | 1   | 10F50KCS         | 10-32 X .500" SHCS Black                  |
| 29   | 1   | 37KKPFS          | 3/8-18 Socket Pipe Plug                   |
| 30   | 4   | 37FNGFOC         | 3/8-24 Locking Flanged Nut                |
| 31   | 1   | 22H-S05M-CLR     | 1/2-20 Hex Zero Leak with Magnet          |
| 32   | 4   | 2418T135         | O-Ring, Buna -110                         |
| 33   | 1   | 60625-S36        | Inner Primary                             |
| 34   | 2   | 31588            | 1/8" NPT Plug                             |
| 35   | 2   | 63533-41A        | 1/8" NPT Nipple                           |
| 36   | *   | R16DDUCE         | Bearing, Inner Primary                    |
| 36   | *   | 16005 / 56-1068A | Bearing & Adapter, Primary (Old 6N4 Only) |
| 37   | 1   | 200RRRI          | 2" Internal Snap Ring                     |
| 38   | 1   | 56-5101          | Seal, Inner Primary                       |
| 39   | 1   | 37R75PDO         | 3/8" X .750" Solid Dowel                  |
| 40   | 1   | PAP2525P10       | Permaglide Bearing                        |
| 41   | 1   | 25R100PDP        | 1/4" X 1.000" Dowel                       |
| 42   | 1   | 12035B           | Oil Seal, Starter Jackshaft               |
| 43   | 1   | TTP-125          | Collar, Starter Jackshaft                 |
| 44   | 1   | 60630-S36        | Starter Ear Standoff                      |
| 45   | 1   | 31R100PDOS       | 5/16" X 1.000" Solid Dowel                |
| 46   | 2   | 31C175KCSS/P     | 5/16-18 X 1.750" SHCS S.S.                |
| 47   | 2   | 31C125KCSS/P     | 5/16-18 X 1.250" SHCS S.S.                |
| 48   | 2   | 6100             | 5/16" Washer                              |
| 49   | 1   | 9213K17          | 1/4-20, 1" H, 1" W – Dampener             |
| 50   | 3   | 9213K14          | 1/4-20, 1/2" H, 1" W – Dampener           |

**Note:** Add a "P" and the end of the part number for polished parts or an "R" at the end for raw blasted parts. Example: 60630-S36P (polished starter ear standoff). Item # 37 does not come in the kit if you are using with an old style 6N4 transmission with a .983" stepped mainshaft.

\* = Customer preference; if you are using on a 4-Speed, 6N4 Transmission or old style 6N4 with .983" mainshaft.

\$ = The Derby and Inspection Cover kit is sold separately (pn 3102-TTP-P / 3102-TTP-R).

# EXPLODED VIEW, TTP KICK VERSION



KICKER VERSION SHOWN; FIGURE 2

## LEGEND, TTP KICK VERSION

| ITEM | QTY | PN               | DESCRIPTION                               |
|------|-----|------------------|-------------------------------------------|
| 1    | \$  | 60645-GAS        | Gasket, Inspection Cover                  |
| 2    | \$  | 60572-36         | Inspection Cover                          |
| 3    | 10  | 91790A539        | 1/4-20 X .625" Oval Screw S.S.            |
| 4    | \$  | 60555-36         | Derby Cover                               |
| 5    | \$  | 60640-GAS        | Gasket, Derby Cover                       |
| 6    | 10  | 91790A542        | 1/4-20 X 1.000" Oval Screw S.S.           |
| 7    | 1   | 60505-K36        | Outer Primary                             |
| 8    | 1   | 60650K-GAS       | Gasket, Primary                           |
| 9    | 1   | 5304-37PP        | E-Clip, 3/8"                              |
| 10   | 1   | 39976-01         | Shoe, Tensioner                           |
| 11   | 1   | 3068-DSSC        | Tensioner L-Bracket                       |
| 12   | 1   | 37024            | 3/8-16 Nylock Nut                         |
| 13   | 1   | 33082            | Washer, 3/8"                              |
| 14   | 2   | 31C75KFC         | 5/16-18 X .750 FHCS Black                 |
| 15   | 1   | 3069-DSSC        | Tensioner Plate                           |
| 16   | 1   | 21818            | 3/8-16 X 1.250" Bolt                      |
| 17   | 2   | 31C100KCSS/P     | 5/16-18 X 1.000" SHCS S.S.                |
| 18   | 1   | 91030A455        | Flanged Motor Nut                         |
| 19   | 2   | 26751            | 1/4" X .750" Solid Dowel                  |
| 20   | 2   | 13056            | 5/16-18 X 1.125" Hex Bolt                 |
| 21   | 2   | ZPN292216        | Lock Tab                                  |
| 22   | 1   | 5346K15          | 1/8" NPT Barb Fitting                     |
| 23   | 4   | 37FNGFOC         | 3/8-24 Locking Flanged Nut                |
| 24   | 4   | 2418T135         | O-Ring, Buna -110                         |
| 25   | 1   | 22H-S05M-CLR     | 1/2-20 Hex Zero Leak with Magnet          |
| 26   | 1   | 60620-K36        | Inner Primary                             |
| 27   | 2   | 31588            | 1/8" NPT Plug                             |
| 28   | 2   | 63533-41A        | 1/8" NPT Nipple                           |
| 29   | *   | R16DDUCE         | Bearing, Inner Primary                    |
| 29   | *   | 16005 / 56-1068A | Bearing & Adapter, Primary (Old 6N4 Only) |
| 30   | 1   | 200RRRI          | 2" Internal Snap Ring                     |
| 31   | 1   | 56-5101          | Seal, Inner Primary                       |

**Note:** Add a "P" and the end of the part number for polished parts or an "R" at the end for raw blasted parts. Example: 60630-S36P (polished starter ear standoff). Item # 30 does not come in the kit if you are using with an old style 6N4 transmission with a .983" stepped mainshaft.

\* = Customer preference; if you are using on a 4-Speed, 6N4 Transmission or old style 6N4 with .983" mainshaft.

\$ = The Derby and Inspection Cover kit is sold separately (pn 3102-TTP-P / 3102-TTP-R)

## TIN TYPE PRIMARY PREPARATION

### DISSASSEMBLY:

1. Starting with the basics and for your safety, **DISCONNECT BOTH BATTERY TERMINALS (FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY).** Always **disconnect the negative terminal first.**
2. Remove the battery, battery tray and then drain your primary and oil tank. On some models it is necessary to remove foot pegs / floor boards in order to remove the outer primary.
3. Remove your stock outer primary cover; refer to your Factory Service Manual to remove your stock clutch assembly and related primary components using the proper safety precautions and tools. Clutch hub puller tool pn 95960-41A is used to remove the clutch hub off of the transmission shaft, figure 3
4. Remove the oil tank, starter and inner primary following your Factory Service Manual.
5. Loosen your transmission mounting plate nuts.
6. With all these components removed your bike should look like figure 4.



REMOVING CLUTCH HUB ASSEMBLY | FIGURE 3



STRIPPED DOWN | FIGURE 4

### TIN TYPE PRIMARY PREP:

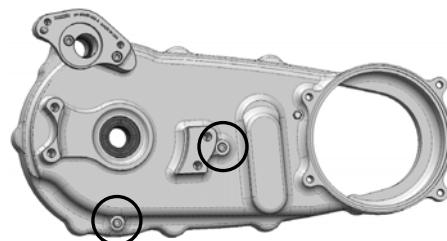


**BAKER DRIVETRAIN SHIPS THE TTP READY TO INSTALL WITH THE OIL DRIP AND RETURN LINE FITTINGS. RUN THE TTP LIKE A MODERN WET PRIMARY FOLLOW STEPS 3 - 6.**

1. The TTP "Tin Type Primary" is shipped assembled; if you purchased the cover kit, remove the derby, inspection covers and then outer primary cover with gaskets.
2. The inner primary has the mainshaft bearing, seal and chain tensioner assembly installed, if you have a starter version TTP the starter ear standoff, permaglide, seal and collar are installed and ready for installation; no disassembly of these items are necessary.

**Steps 3 – 6 are for running the primary like a sealed modern wet setup**

3. Remove the 1/8" NPT line fittings from the back of the inner primary. For your reference refer to Figure 1 or 2.
4. Install the two 1/8" NPT plugs (pn 31588) using pipe thread sealant; snug both plugs. Figure 5 shows the primary with plugs installed.
5. Remove the 1/8" NPT barb fitting (pn 5346K15) on the inside, inner primary, for your reference refer to Figure 1 or 2.
6. The primary will vent through the transmission like a stock 5-speed setup. If you have a clutch nut with a seal installed, the seal must be removed also a flat (length wise) on the release rod added (like a 5-speed clutch release rod). This will ensure proper venting of the primary by letting air to pass through the mainshaft.



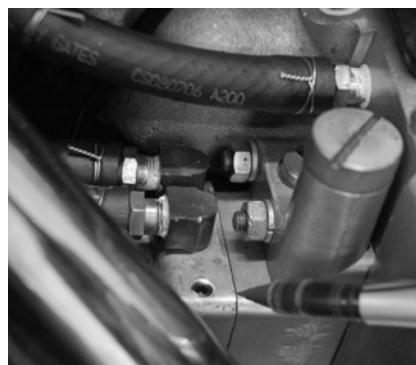
1/8" NPT PLUGS INSTALLED | FIGURE 5

## TIN TYPE PRIMARY INSTALLATION

### PRIMARY INSTALLATION:

1. Clean the motor O-Ring area making sure it is free of debris and oil using brake cleaner or equivalent; install the new motor O-Ring.
2. Lubricate the mainshaft seal on the back of the inner primary with a little bit of motor oil or primary fluid.

**IF YOU ARE RUNNING THE STOCK OIL DRIP AND RETURN LINES FOLLOW STEPS 3 – 5. PROCEED TO STEP 6 IF YOU ARE RUNNING THE TTP AS A MODERN WET PRIMARY.**

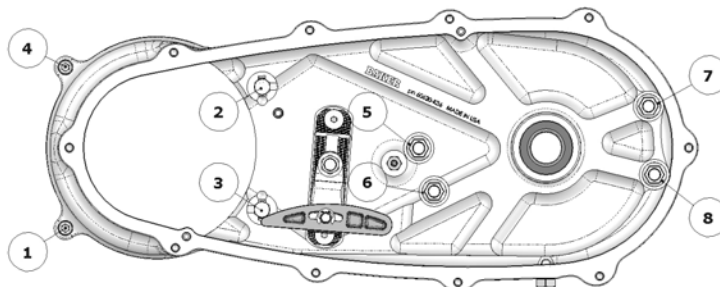


PLUG OFF DRIPPER LINE | FIGURE 6



T FITTING INSTALLED | FIGURE 7

3. Plug off / shut off the oil drip feed from your oil pump following your Factory Service Manual. The oil pump dripper feed will no longer be used to oil your primary. There are two ways to do this; pinch and solder the end to seal it off or heat up the dripper nipple and pull it out of the oil pump then tap the hole using a 1/4-28 and installed a 1/4-28 set screw, figure 6.
4. Route the breather "T" line off of the motor, "T" goes in between the motor and oil tank which is routed to the TTP chain dripper, figure 7. Tighten the line to the inner primary first.
5. Install the inner primary onto the motor and transmission, routing the dripper line to the "T" fitting.
6. Install the rear suction line to the primary and secure both the suction and dripper line using a hose clamp.
7. Install the four O-Rings (pn2418T135) provided over the transmission studs; push the O-Rings on until they are seated into the inner primary pockets.
8. Using blue Loctite® install the motor bolts, lock tabs and self locking transmission flanged nuts; snug.
9. Torque the primary down following the sequence shown in figure 8. Torque motor bolts to 200-220 in-lbs and the transmission to 33-38 ft-lbs.
10. Check to see if the transmission needs to be shimmed using feeler gages; if there is a gap between the transmission case and the mounting plate shims must be installed to maintain proper alignment.
11. Torque transmission mounting plate bolts to 33-38 ft-lbs.



TORQUE SEQUENCE | FIGURE 8

## TIN TYPE PRIMARY INSTALLATION

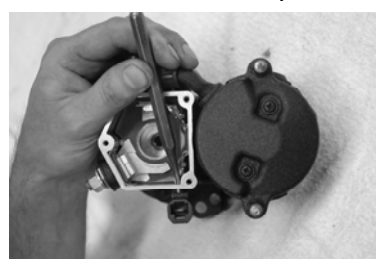
### FOR STARTER VERSION PRIMARIES ONLY

If you're using a stock oil tank setup there are a few steps that need to be taken so you can mount up your starter.

1. Remove the stock oil tank dampener mounts from the frame and battery box. BAKER supplies new dampeners that move the oil tank to the right an  $\frac{1}{4}$ " for starter clearance, figure 9.
2. Install the new dampeners; two  $\frac{1}{2}$ " long dampeners go on the left side of the frame, one 1" long dampener goes on the right. The extra  $\frac{1}{2}$ " long dampener mounts to the battery tray.
3. The 1.4kw H-D® starter will have to be modified by turning the solenoid connector 90 degrees clockwise.
  - o Remove the starter end cap and plunger. The connector body is a press fit into the housing so some slight heat on the housing might be required (**DO NOT HEAT THE CONNECTOR, SHIELD IT WITH A PIECE OF METAL**).
  - o Using a small punch and mallet gingerly tap from the inside out. Once popped out, rotate 90 degrees and reinstall the connector using a rubber mallet and some patience, tap into place until the connector is seated. Refer to figures 10 and 11.
  - o Re-install the plunger and push it in all the way; make sure that the plunger does not contact the connector wires, if it does lightly bend out of the way.
  - o Re-install the cap with seal using blue Loctite®, snug bolts.



STOCK SHOWN WITH 2 NEW | FIGURE 9



TAPPING OUT CONNECTOR | FIGURE 10



CONNECTOR ROTATED 90 | FIGURE 11



**TAKE YOUR TIME WHILE REMOVING AND ROTATING THE SOLENOID CONNECTOR. DO NOT FORCE TO ROTATE THE 90 DEGREES AS IT WILL BREAK. DO NOT OVER TIGHTEN THE CAP SCREWS AS THEY WILL BREAK.**

4. Install the splined washer (pn99-1058) onto the starter splined shaft, then the jackshaft spring (pn54446-004) onto the starter splined shaft.
5. Slide the jackshaft collar (pnTTP-125) into the inner primary starter ear, figure 12.
6. Install the starter assembly using two 5/16-18 X 1.250" and washers (pn31C125KCSS/P and pn6100) with blue Loctite®, be careful not to drop the spring and splined washer off of the starter shaft while sliding into position. Just snug the bolts for now.
7. Apply a small amount of oil around the starter jackshaft (pn 732407-E); install the jackshaft through the inner primary into the starter. You might have to spin the jackshaft around to line up the splines so the jackshaft goes onto the starter and fully seats.



COLLAR INSTALLATION | FIGURE 12

## PRIMARY INSTALLATION CONT.

8. Once the jackshaft is seated install the provided 10-32 X .500" with washer (pn10F50KCS and pn.203x.546x.048N) or 1/4-20 X .500" (pn25C50HFB8Z) with blue Loctite®. Holding the jackshaft with a pair of pliers, torque bolt to 60-80 in-lbs.
9. With the jackshaft in place torque the starter bolts to 200-220in-lbs.



**CHECK TO MAKE SURE THAT AFTER THE JACKSHAFT IS INSTALLED AND THE STARTER IS TORQUED THAT IT PULLS OUT, SPINS FREELY AND SNAPS BACK INTO POSITION. IF THE SHAFT BINDS OR WILL NOT PULL OUT FREELY IT WILL NOT FUNCTION PROPERLY. THIS CAN CAUSE COMPONENT DAMAGE; THIS IS COMMON ON SOME CHROME STARTERS DUE TO CHROME BUILD UP ON THE STARTER FLANGE. SOME CHROME STARTERS NEED TO BE SANDED TO REMOVE CHROME BUILD UP BEFORE THEY WILL FIT CORRECTLY.**

10. After you verified that the jackshaft functions properly, install the 3/8" pipe plug (pn 37KKPFS) using pipe thread sealant and snug.
11. If you are using the stock mechanical clutch cable and lever setup you must:
  - o Remove the stock release arm and replace with BAKER pnTTP-200A (sold separately).
  - o Install the BAKER release Arm, then slide on the supplied cable extension ferrule, figure 13 and hook up the cable to the new arm. Hold off on adjustment at this time.



FERRULE INSTALLATION | FIGURE 13

### PRIMARY INSTALLATION CONT:

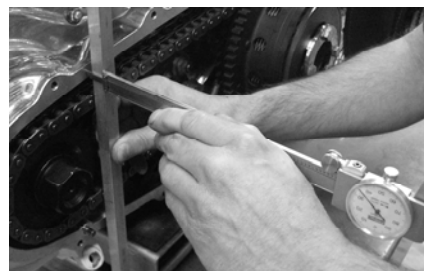
12. Install the new motor sprocket and shims (must be purchased separately) along with clutch and chain. A 24 tooth motor sprocket is the maximum size that will fit the TTP.



**CHECK THE PRIMARY CHAIN ALIGNMENT TO ENSURE CHAIN LIFE AND PREVENT COMPONENT FAILURE. CHAIN ALIGNMENT MUST BE WITHIN .030" (0.76MM) FOR PROPER ALIGNMENT.**

#### CHAIN ALIGNMENT:

- o With the clutch, chain and sprocket installed; install the clutch nut and flanged motor nut (pn 91030A455); snug at this time.
- o Snug the chain adjustment so that the chain is taut.
- o Place a straightedge across the chain sideplates. With a dial caliper, measure the distance from the straightedge to the gasket surface of the inner primary. When taking the measurement, measure as close to the motor sprocket as possible. Record this measurement. Figure 14
- o Repeat the procedure near the clutch sprocket.



CHECKING CHAIN ALIGNMENT | FIGURE 14

The two measurements taken will be the spacer thickness needed or subtracted (if required). H-D® offers a wide range of motor sprocket spacers to accommodate your needs.

- o If you are within the .030" of chain alignment, loosen your chain, remove the flanged motor sprocket nut and clutch nut.

## PRIMARY INSTALLATION CONT.

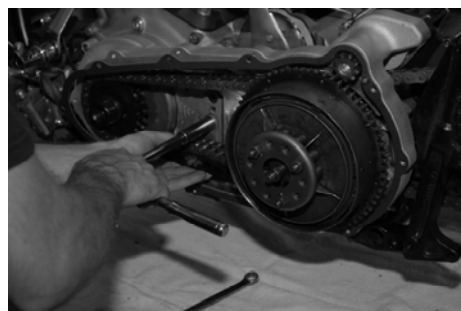
13. Clean the threads on the clutch and motor nut using brake cleaner or lacquer to ensure they are free of oil.
14. Install motor sprocket nut and clutch nut using red Loctite®.
15. Torque to Factory specifications following your Factory Service Manual.



**PRIMARY CHAIN MUST BE ADJUSTED AT THE TIGHTEST SPOT IN THE CHAIN, ROTATE THE MOTOR AROUND TO FIND THIS SWEET (TIGHTEST) SPOT. ADJUSTING THE CHAIN TIGHTER THEN SPECIFIED WILL RESULT IN EXCESSIVE WEAR. ALL MEASUREMENTS ARE TAKEN FROM THE UPPER STRAND IN THE MIDDLE OF THE CHAIN, BETWEEN THE MOTOR AND CLUTCH SPROCKET.**

16. Adjust primary chain, figure 15
  - a. **With engine cold** between 5/8–7/8in.
  - b. **With engine hot** between 3/8–5/8in.
  - c. Torque adjuster screw nut (pn 37024) to 21-29 ft-lbs.

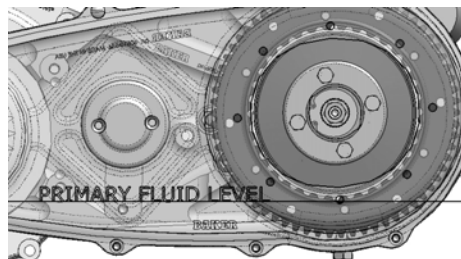
**The measurement is not total free play just upward play on the top strand.**



ADJUSTING PRIMARY CHAIN | FIGURE 15

17. Install the primary gasket over the 1/4" dowels then install the outer primary.
18. Using blue Loctite® install the 10 outer primary oval slotted screws (pn 91790A542). Snug all of the screws starting from the center working your way outward. Repeat this a couple times to make sure all screws are snug. Tighten screws to 100-110 in-lbs.
19. Adjust the clutch following steps listed in your Factory Service Manual.
20. Install inspection cover and gasket using blue Loctite® on the screws, snug screws (pn 91790A539) then torque to 100-110 in-lbs.

**IF YOU ARE RUNNING THE TTP AS A MODERN WET PRIMARY; USING PRIMARY FLUID (pn 99887-84) FILL THE PRIMARY UNTIL IT JUST HITS THE BOTTOM OF THE CLUTCH PRESSURE PLATE WITH THE BIKE LEVEL. 20-24 fl-oz, see figure 16**



PRIMARY FLUID LEVEL | FIGURE 16

21. Install derby cover with gasket using blue Loctite® on the screws, snug screws (pn 91790A539) then torque to 100-110 in-lbs.
22. If floor boards or pegs were removed to install your primary reinstall them as time per Factory Service Manual.

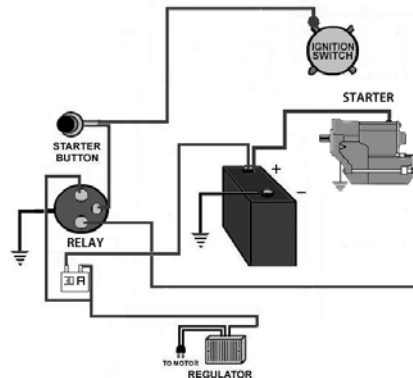
### FOR STARTER VERSION PRIMARIES

Now that the primary end is all buttoned up we have to do some light wiring before we re-install the oil tank and route the oil lines.

- Using the wiring diagram shown in figure 17 for reference, route a new starter cable from the battery to the starter. Make sure in routing of the cable that it does not interfere with the clutch cable release arm or cable. Once cable is tightened down install a cable boot over the connection to protect the lines and accidental grounding.

## TTP INSTALLATION CONT. / FINISHLINE

- Light modification is required to the oil tank in order to clear the starter end cap bolt. Using a rat tail file clearance the tank bracket as shown in figure 18.
23. Install the oil tank into the frame; if you have a starter version the oil tank will have to be slide in from the right side of the motorcycle. While sliding it into position, attach the oil feed line and tighten down using a hose clamp.
  24. Install the left side tank mount nuts and tighten per your Factory Service Manual.
  25. Install the battery tray and the bottom tray bracket to your transmission per your Factory Service Manual.

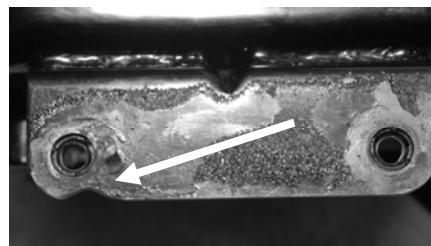


STARTER WIRING DIAGRAM | FIGURE 17



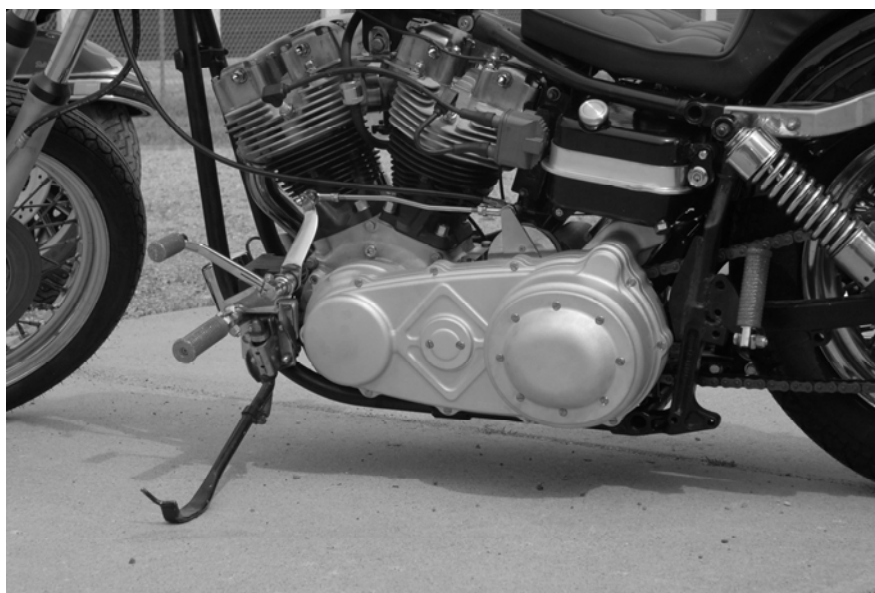
**IF YOU DO NOT HAVE THE TRAY BRACKET, YOU MUST ORDER AND INSTALL ONE FOR STARTER VERSIONS. THIS WILL PROPERLY SUPPORT THE BATTERY FROM SAGGING AND HITTING THE STARTER, LINES AND WIRING.**

26. Route and hook up your oil lines to the oil tank, finish any wiring to the starter relay and starter button, if applies.
27. Install the battery, hook up and fill with motor oil per your Factory Service Manual. Install your seat.



NOTCH OIL TANK BRACKET | FIGURE 18

**BAKER recommends that you follow your Factory Service Manual for service intervals on your primary chain adjustment. Initial adjust your primary chain is 500-1000 miles if new, then every 5,000 miles.**



1976 FX SHOWN WITH TTP INSTALLED | FIGURE 19

## **BAKER TIN TYPE PRIMARY TERMS**

### **SPECIAL ORDERS**

A minimum \$500 deposit is required with all special orders. Special orders include unique finishes.

### **ALL OTHER ORDERS**

Orders can be pre-paid using VISA, MasterCard or American Express.

Prices shown are F.O.B. Haslett, MI. BAKER™ provides free UPS ground shipping on all retail orders for complete transmissions or transmission kit. UPS air shipment is available upon request. Customer is responsible for air shipment premiums.

### **LIMITED WARRANTY**

BAKER™ Inc. Primaries are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of 2 years from the date of purchase or up to 24,000 miles - whichever is sooner.

If the product is found by BAKER™ to be defective, such products will, at the option of BAKER™, be replaced or repaired at cost to BAKER™.

In the event warranty service is required, the original purchaser must call or write BAKER™ immediately with the problem. If it is deemed necessary for BAKER™ to make an evaluation to determine whether the transmission assembly or transmission kit is defective, the entire transmission assembly, whether originally purchased as an assembly or kit, must be properly packaged and returned prepaid to BAKER™ with a copy of the original invoice of purchase.

If after an evaluation has been made by BAKER™ and a defect in materials and/or workmanship is found, BAKER™ will, at BAKER™ option, repair or replace the defective part of the assembly. Warranty card must be returned within 45 days of purchase to be valid.

### **ADDITIONAL WARRANTY PROVISIONS**

This limited warranty does not cover labor or other costs or expenses incidental to the repair and or replacement of BAKER™ products. This warranty does not apply if one or more of the following situations is judged by BAKER™ to be relevant: improper installation, accident, modification (including but not limited to use of unauthorized parts), racing, high performance application, mishandling, misapplication, neglect (including but not limited to improper maintenance), or improper repair.

BAKER™ shall not be liable for any consequential or incidental damages arising out of or in connection with a BAKER™ transmission assembly, transmission kit, component or part. Consequential damages shall include without limitation, loss of use, income or profit, or losses sustained as the result of injury (including death) to any person or loss of or damage to property.

BAKER™ transmissions, transmission kits and components are designed exclusively for use in Harley-Davidson® motorcycles. BAKER™ shall have no warranty or liability obligation if a BAKER™ part is used in any other application.

If it is determined that a BAKER™ transmission assembly has been disassembled during the warranty period for any reason, this limited warranty will no longer apply.

## **BAKER TIN TYPE PRIMARY DISCLAIMER**

The words Harley Davidson and H-D are registered trademarks and are for reference only. Use of H-D model designations and part numbers are for reference only. BAKER Drivetrain has no association with, and makes no claim against, these words, trademarks, or companies.

It is the sole responsibility of the user to determine the suitability of this product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other as well as all other obligations, duties and risks associated therewith.

### **CUSTOMER SUPPORT**

For any installation or service questions, please contact our BAKER technical department toll free: 1-877-640-2004.

